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Zeitschrift für Meteorologie,
Band 5, Nr 7/8 (Jul/Aug 51), pp 249-250.
Berlin: 1951.

W. König

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With 1 Illustration

Stüring, in the winter of 1893/94, made preliminary investigations during a stay of several months on the Brocken, which later led to the erection of the meteorological station. His reports on observational results on the Brocken which appeared in the subsequent issues of the Meteorologischen Zeitschrift, [Meteorological Journal], as well as his publication Zur Geschichte der Wetterwarte auf dem Brocken ["The History of the Meteorological Station on the Brocken"] (Das Brockenbuch, Braunschweig 1926) give evidence of the lasting interest which he also later showed towards the Brocken. Thus, it seems justified, especially in this commemorative issue, to report some worthwhile facts on the fate of the Brocken meteorological station and its present condition. These reports will be welcomed by many German meteorologists since a great value is attributed to the Brocken observations because of the special geographical location of the mountain, despite its moderate height of only 1,142 meters. Thus, interest also exists about the peculiarities of the observational site. After the present, active director of the Brocken meteorological station, Kurt Glass, recently compiled the material on the history of the former Brocken observations and the rehabilitation of the present station in an internal commemorative manuscript, I may in essence rely upon his facts.

Ever since the thirties of the last century a long series of meteorological data has been obtained on the Brocken, since an inn, in existence since 1800, offered accomodation to an observer.

In 1895 an establishment was created for the first time in the form of a station on the mountain to serve primarily the special purpose of meteorological observations. This was done mainly upon the urging of R. Assmann, and the Prussian Meteorological Institute had the station erected with federal funds after the initially mentioned preparations of Suring. It consisted of a towerlike wooden building connected with the Brocken Hotel. As little as 20 years later, however, architectural deficiencies and lack of space forced improvement of the existing conditions. In 1912 construction was begun next to the old wooden structure on a stone tower whose completion, however, required several years due to great technical difficulties. When it was occupied in the year 1917, it was hoped that with this granite-structure a meteorological establishment was created to last for many decades. But this was not the case.

In the year 1938, the erection of a very massively built 64 meter high observation tower close to the meteorological station necessitated abandonment of the latter and erection of a new tower structure at a spot which was removed from the disturbing influences of the observation tower upon the meteorological observations. It served its purpose in its then existing form for six years until the end of the war. As is known, intense fighting took place in the Harz in March and April of 1945, which did not spare the Brocken.

An air-attack by American bombers completely destroyed the hotel structure and the former meteorological station before occupation of the Brocken, while the new meteorological tower with its strong masonry work, even in a damaged condition, remained intact to an extent that made reconstruction possible.

This, however, was not simple. Right up to April 1947 the structure was occupied by American soldiers, so that only after that time could a plan for the re-erection of a Brocken meteorological station be drawn up. The completely destroyed interior of the structure could at first not be used for its actual purpose. The observations were begun on improvised equipment erected away from the tower, while the observation personnel had to exist under difficult conditions. Fortunately, the observational material of 37 years could be saved during the clean-up work. Observational data are missing from March 1945 until September 1947.

The rehabilitation of the structure was energetically undertaken by the Land meteorological station Sachsen-Anhalt under its director Doctor A. Maede after observations were resumed. However, the problems of employment, accommodation of workers, their provisioning, of course also the material supply and not last the material transport to the mountain, created obstacles difficult to portray. It is to the credit of the capability, the prudence, and the working ambition of the District construction master Heydecke of Blankenburg a. H., who executed the rehabilitation and who also directed the erection of the new government financed Brocken Hotel, that all complications were overcome and that in October 1948 the

structure could be used. Much remained to be done because the interior furnishing was postponed at first. Finally in autumn of 1950, when regular observations had already been made for 3 years and reports of same had been made for 2 years, the completion of the rehabilitation work could be reported, after the zinc plate roofing had also been renewed for the second time and a water connection was established.

The erected masonry tower structure, $23\frac{1}{2}$ meters in height, is lined with boards on the exterior (see illustration). On the inside, where a considerable part is claimed by the spacious staircase, it contains the following on its 6 floors and 10 rooms: on the ground floor a guestroom, on the upper floor the observation room, and in between, the working, living, and residence-rooms of the employees. To conserve space, all rooms have built-in furniture, and make a very comfortable impression. The heating problem has been solved with efficient Dutch tile stoves. The 4 employees, including the director and a female helper, provide for their own housekeeping.

(ILLUSTRATION)

The Brocken meteorological station in its present form.

All outside observations are made on the platform of the tower with the exception of precipitation and ground temperature measurements. Because of the considerable wind velocities typical of the Brocken a very stable erection of each instrument is necessary. Therefore it has not been possible to date to obtain a registering

anemometer, suitable for these conditions. A fenced-in area, 60 meters distant, is provided for the measuring of precipitation and ground temperatures, in which also a humble botanical garden of alpine plants is accommodated. Unfortunately, the surroundings containing ruins of buildings destroyed by bombardment provide a somber impression.

A brief description of the Brocken Mountain may be added for those unacquainted with the Harz. Its ridge provides an ideal point for meteorological observations. The granite mass of the mountain rises as a flat summit for several 100 meters above the plateau-forming mountain range of the Ober- and Unterharz (Upper- and Lower-Harz). Since avalanches and powerful storms suppress the tree line with respect to normal conditions, the surface of the flat summit is treeless over an area of about 1 kilometers in diameter, and only covered by grass, herbs, and moss. On the ridge one obtains an extensive view over the Harz mountain range, and under suitable weather conditions a wonderful view beyond it. For this reason the Brocken is the goal of numerous visitors, particularly since ascent by vehicles is possible. In addition, a train leads to the top of the mountain.

Address: W. Konig, Potsdam, Met. Hauptobs